

## Section 864

### 863-3 MEASUREMENT AND PAYMENT

*Remove Existing Guardrail* and *Remove Existing Guiderail* will be measured and paid in linear feet of guardrail or guiderail that has been satisfactorily removed. Measurement will be made to the nearest 1.0 foot from center to center of the outermost post or end shoe center bolt in the length of the guardrail or guiderail being removed. Measurement will be made before removing the guardrail or guiderail.

The work to fill any void or fix all damage created by post or anchor removal is incidental to the work of this section.

Payment will be made under:

Pay Item	Pay Unit
Remove Existing Guardrail	Linear Foot
Remove Existing Guiderail	Linear Foot

## SECTION 864

### REMOVE AND RESET EXISTING GUARDRAIL AND GUIDERAIL

#### 864-1 GENERAL

Remove and reset existing guardrail, guiderail and anchors of any type at locations shown in the plans and the contract.

#### 864-2 CONSTRUCTION METHODS

Exercise care not to damage adjoining structures or other appurtenances. Fill any void created by post or anchor removal and repair all damage at no cost to the Department. Reset existing guardrail and guiderail in accordance with Articles 862-3 and 865-3. Reset guardrail and guiderail in a condition that is equal to or better than the condition that exists before the guardrail and guiderail is removed. Replace any of the guardrail and guiderail components unnecessarily damaged.

### 864-3 MEASUREMENT AND PAYMENT

*Remove and Reset Existing Guardrail* will be measured and paid in linear feet of guardrail and anchors that has been removed, reset and accepted. Measurement will be made after the guardrail has been reset.

*Remove and Reset Existing Guiderail* will be measured and paid in linear feet of guiderail and anchors that has been removed, reset and accepted. Measurement will be made after the guiderail has been reset.

Such price will include, but is not limited to, removing and resetting the guardrail, guiderail and anchors and for furnishing all equipment, labor and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
Remove and Reset Existing Guardrail	Linear Foot
Remove and Reset Existing Guiderail	Linear Foot

## SECTION 865

### CABLE GUIDERAIL

#### 865-1 DESCRIPTION

Construct cable guiderail in accordance with the contract and at the locations designated in the plans or as directed. Install additional double faced cable guiderail posts without cable at median hazards as shown in *Roadway Standard Drawings*.

**865-2 MATERIALS**

Refer to Division 10.

Item	Section
Hardware	1046-4
Portland Cement Concrete, Class A	1000
Posts	1046-3
Precast Concrete Anchors	1077
Rail Elements	1046-2
Select Material, Class VI	1016

Manufacture cable in accordance with AASHTO M 30, Type I, Class A. The cable shall be pre-inspected at the producer's facility before shipment.

Additional guiderail posts shall be double faced guiderail intermediate posts.

**865-3 CONSTRUCTION METHODS**

Erect the rail elements to produce a smooth continuous rail paralleling the line and grade of the highway surface or as shown in the plans.

Posts may be power driven or set by hand. Protect the top of steel posts by a suitable driving cap if power driven. If set by hand, dig post holes to the depth and at the locations shown in the plans. Thoroughly ram the bottom of the post holes so that the posts will have a stable foundation. Set the posts plumb and accurately space and align. Backfill the post holes in 6" layers with suitable material and thoroughly compact by tamping or puddling.

Where rock interferes with the proper installation of the post, excavate a shaft in the rock at least 9" wide, parallel to the roadway, by 23" long, perpendicular to the roadway, and 24" deep. Place the post against the roadside edge of the shaft and fill in behind the post with Class VI select material, up to the top elevation of the rock. Fill the remainder of the hole with earth material. Where timber posts are to be driven in fill slopes 1.5:1 or steeper and the fill height is 15 ft or more, auger a 6" diameter pilot hole to the full depth of the post before driving.

When guiderail is being constructed near traffic, conduct operations to constitute the least hazard to the public. Schedule and conduct operations to construct and complete each individual continuous guiderail installation in the least possible time.

Do not begin work on any section of new guiderail until preparations are made to fully complete the installation of the section as a continuous operation. Once work begins on a section, pursue the work to its completion unless inclement weather or other conditions beyond the control of the Contractor interfere with the work. Begin attachment of the cable elements at the approach end of the guiderail and continue in the same direction as the movement of traffic.

**865-4 MEASUREMENT AND PAYMENT**

*Cable Guiderail* will be measured and paid in linear feet of guiderail that has been satisfactorily completed and accepted exclusive of that length of guiderail that is within the pay limits of guiderail anchors. Measurement will be made from center to center of the outermost post in the length of guiderail being measured. Such price will include, but is not limited to, furnishing and erecting posts, cable, miscellaneous hardware, concrete, delineators and all incidentals necessary to complete the work.

*Double Faced Cable Guiderail* will be measured and paid in linear feet of guiderail that has been satisfactorily completed and accepted exclusive of that length of guiderail that is within the pay limits of guiderail anchors. Measurement will be made from center to center of the outermost post in the length of guiderail. Such price will include, but is not limited to, furnishing and erecting posts, cable, miscellaneous hardware, concrete, delineators and all incidentals necessary to complete the work.

## Section 866

*Cable Guiderail Anchor Units* will be measured and paid in units of each completed and accepted.

*Additional Guiderail Posts* will be measured and paid in units of each completed and accepted.

No separate measurement will be made of any cable, posts, concrete, hardware or any other components of the completed anchor units that are within the pay limits shown in the plans.

Payment will be made under:

Pay Item	Pay Unit
Cable Guiderail	Linear Foot
Double Faced Cable Guiderail	Linear Foot
Cable Guiderail Anchor Units	Each
Additional Guiderail Posts	Each

## SECTION 866 FENCE

### 866-1 DESCRIPTION

Furnish and erect woven wire, chain link and barbed wire fence with gates in conformity with the details shown in the plans and at locations as shown in the plans.

### 866-2 MATERIALS

Refer to Division 10.

Item	Section
Barbed Wire	1050-4
Chain Link Fabric	1050-6
Fence Materials	1050-1
Fittings and Accessories	1050-7
Metal Posts and Rails	1050-3
Organic Zinc Repair Paint	1080-9
Timber Posts and Braces	1050-2
Woven Wire	1050-5

Use Class B concrete for anchors. Instead of Class B concrete, pre-mixed commercially bagged dry concrete mix may be used if the concrete meets the minimum strength requirements for Class B concrete when mixed with the quantity of water shown on the instructions printed on the bag.

### 866-3 CONSTRUCTION METHODS

#### (A) Clearing and Grubbing

Only clear the ground that is necessary to erect a clear fence line. Clearing includes satisfactory removal and disposal of all trees, brush, stumps, existing fence or other objectionable material. Erect the fence to conform to the general contour of the ground. Place the bottom of the fabric or wire no more than 6" above the natural ground, except where the Engineer directs that ditches and depressions are to be spanned by using extra length posts in conjunction with additional barbed wire installed between the bottom of the fence wire or fabric and the ground surface. Grade along the fence line to meet the above requirement such that no obstructions to proper drainage are created.